AMENDMENTS TO THE CLAIMS

Prior to the present communication, claims 1-24 were pending in the subject application. Claims 1-4, 6-12, and 14-24 have been amended herein. Claims 1-24 remain pending. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A computer-implemented method for processing data using a computer system having processor, memory, and data storage subsystems, the method comprising:

transforming data from a first data structure to a second data structure via the processor, wherein the second data structure includes at least a first set of leaf nodes under a first ancestor node and a second set of leaf nodes under a second ancestor node;

identifying one or more potential candidate nodes for the first ancestor node via the processor based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the first set; [[and]]

identifying one or more potential candidate nodes for the second ancestor node via the processor based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the second set;

assigning the first ancestor node based on a selection of the potential candidate node most often identified as associated with the leaf nodes in the first set; and

assigning the second ancestor node based on a selection of one or more criteria other than the potential candidate node most often identified as associated with the leaf nodes in the second set.

2. (Currently Amended) A computer-implemented method according to claim 1, wherein assigning the second ancestor node is based upon the second most often identified potential candidate node. ~~further comprising:~~

~~assigning the first ancestor node based on the potential candidate node most often identified as associated with the leaf nodes in the first set.~~

3. (Currently Amended) A computer-implemented method according to claim 1, wherein assigning the second ancestor node comprises creating a new node. ~~2, further comprising:~~

~~assigning the second ancestor node based on the potential candidate node most often identified as associated with the leaf nodes in the second set unless the potential candidate node most often identified as associated with the leaf nodes in the second set is the same as the potential candidate node most often identified as associated with the leaf nodes in the first set, and wherein when the potential candidate node most often identified as associated with the leaf nodes in the second set is the same as the potential candidate node most often identified as associated with the leaf nodes in the first set, then assigning the second ancestor node based on the potential candidate node second most often identified as associated with the leaf nodes in the second set or creating a new node for the second ancestor node.~~

4. (Currently Amended) A computer-implemented method according to claim 1, further comprising:

determining which potential candidate node to assign as the first ancestor node and which potential candidate node to assign as the second ancestor node, based, at least in part, on a determination of which arrangement of potential candidate nodes will most reduce data processing operations when converting an original document data structure to a form represented by the second data structure.

5. (Original) A computer-readable medium having computer-executable instructions stored thereon for performing the method of claim 1.

6. (Currently Amended) A computer-implemented method for processing data using a computer system having processor, memory, and data storage subsystems, the method comprising:

transforming data from a first data structure to a second data structure via the processor, wherein the second data structure includes at least a first set of leaf nodes under a first ancestor node and a second set of leaf nodes under a second ancestor node; [[and]]

identifying one or more potential candidate nodes for the first ancestor node via the processor based, at least in part, on parent nodes from the first data structure associated with the leaf nodes in the first set;

identifying one or more potential candidate nodes for the second ancestor node via the processor based, at least in part, on parent nodes from the first data structure associated with the leaf nodes in the second set;

assigning the first ancestor node based on a selection of the potential candidate node most often identified as associated with the leaf nodes in the first set, wherein the assigned first ancestor node comprises data preserved and maintained from the first data structure; and

assigning the second ancestor node based on a selection of one or more criteria including the potential candidate node most often identified as associated with the leaf nodes in the second set, wherein:

said transforming data, said identifying one or more potential candidate nodes for the first ancestor node, said identifying one or more potential candidate nodes for the second ancestor node, said assigning the first ancestor node, and said assigning the second ancestor node are all conducted incrementally as additional input is received.

7. (Currently Amended) A computer-implemented method according to claim 6, wherein assigning the second ancestor node is based upon the second most often identified potential candidate node. ~~further comprising:~~

~~determining which potential candidate node to assign as the first ancestor node based, at least in part, on the potential candidate node most often identified as associated with the leaf nodes in the first set.~~

8. (Currently Amended) A computer-implemented method according to claim 7, wherein assigning the first ancestor node and assigning the second ancestor node ~~the determining~~ further is based, at least in part, on a determination of which arrangement of potential candidate nodes will most reduce data processing operations when converting an original document data structure to a form represented by the second data structure.

9. (Currently Amended) A computer-implemented method according to claim 6, wherein assigning the second ancestor node comprises creating a new node. ~~further comprising:~~

~~determining which potential candidate node to assign as the first ancestor node; and~~

~~assigning the first ancestor node based on the determined potential candidate node.~~

10. (Currently Amended) A computer-implemented method according to claim 6 [[9]], further comprising:

creating a revised document data structure based on the second data structure and the assigned potential candidate nodes ~~node~~.

11. (Currently Amended) A computer-implemented method according to claim 6, wherein the assigned first ancestor node differs from the assigned second ancestor node ~~data in the first data structure represents electronic ink data~~.

12. (Currently Amended) A computer-implemented method according to claim 6, wherein the transforming includes parsing electronic ink data into a hierarchical data structure corresponding to the second data structure.

13. (Original) A computer-readable medium having computer-executable instructions stored thereon for performing the method of claim 6.

14. (Currently Amended) A data processing computer system having processor, memory, and data storage subsystems, the data processing computer system comprising:

a computer-readable medium containing data representing a first data structure; and

a processor programmed and adapted to: (a) transform the data in the first data structure to a second data structure, wherein the second data structure includes at least a first set of leaf nodes under a first ancestor node and a second set of leaf nodes under a second ancestor node; (b) identify one or more potential candidate nodes for the first ancestor node based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the first set; [[and]] (c) identify one or more potential candidate nodes for the second ancestor node based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the second set; (d) assign the first ancestor node based on a selection of the potential candidate node most often identified as associated with the leaf nodes in the first set; and (e) assign the second ancestor

node based on a selection of one or more criteria including the potential candidate node most often identified as associated with the leaf nodes in the second set.

15. (Currently Amended) A data processing computer system according to claim 14, wherein the processor is further programmed and adapted to assign the second ancestor node based upon the second most often identified potential candidate node. ~~first ancestor node based on the potential candidate node most often identified as associated with the leaf nodes in the first set.~~

16. (Currently Amended) A data processing computer system according to claim 14, wherein the assigned first ancestor node differs from the assigned second ancestor node. ~~15, wherein the processor is further programmed and adapted to assign the second ancestor node based on the potential candidate node most often identified as associated with the leaf nodes in the second set unless the potential candidate node most often identified as associated with the leaf nodes in the second set is the same as the potential candidate node most often identified as associated with the leaf nodes in the first set, and wherein when the potential candidate node most often identified as associated with the leaf nodes in the second set is the same as the potential candidate node most often identified as associated with the leaf nodes in the first set, then the processor is further programmed and adapted to assign the second ancestor node based on the potential candidate node second most often identified as associated with the leaf nodes in the second set or create a new node for the second ancestor node.~~

17. (Currently Amended) A data processing computer system according to claim 14, wherein the processor is further programmed and adapted to determine which potential candidate node to assign as the first ancestor node and which potential candidate node to assign as the second ancestor node based, at least in part, on a determination of which arrangement of potential candidate nodes will most reduce data processing operations when converting an original document data structure to a form represented by the second data structure.

18. (Currently Amended) A data processing computer system having processor, memory, and data storage subsystems, the data processing computer system comprising:

a computer-readable medium containing data representing a first data structure; and

a processor programmed and adapted to: (a) transform data in the first data structure to a second data structure, wherein the second data structure includes at least a first set of leaf nodes under a first ancestor node and a second set of leaf nodes under a second ancestor node; [[and]] (b) identify one or more potential candidate nodes for the first ancestor node based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the first set; (c) identify one or more potential candidate nodes for the second ancestor node based, at least in part, on ancestor nodes from the first data structure associated with the leaf nodes in the second set; (d) assign the first ancestor node based on a selection of the potential candidate node most often identified as associated with the leaf nodes in the first set, wherein the assigned first ancestor node comprises data preserved and maintained from the first data structure; and (e) assign the

second ancestor node based on a selection of one or more criteria other than the potential candidate node most often identified as associated with the leaf nodes in the second set.

19. (Currently Amended) A data processing computer system according to claim 18, wherein the processor is further programmed and adapted to assign the second ancestor node based upon the second most often identified potential candidate node. ~~determine which potential candidate node to assign as the first ancestor node based, at least in part, on the potential candidate node most often identified as associated with the leaf nodes in the first set.~~

20. (Currently Amended) A data processing computer system according to claim 19, wherein the first ancestor node and second ancestor node are assigned ~~determining further is based,~~ at least in part, on a determination of which arrangement of potential candidate nodes will most reduce data processing operations when converting an original document data structure to a form represented by the second data structure.

21. (Currently Amended) A data processing computer system according to claim 18, wherein the second ancestor node is assigned with a newly created node. ~~processor is further programmed and adapted to: (c) determine which potential candidate node to assign as the first ancestor node; and (d) assign the first ancestor node based on the determined potential candidate node.~~

22. (Currently Amended) A data processing computer system according to claim 18 [[21]], wherein the processor is further programmed and adapted to create a revised document data structure based on the second data structure and the assigned potential candidate nodes ~~node~~.

23. (Currently Amended) A data processing computer system according to claim 18, wherein the data in the first data structure represents electronic ink data.

24. (Currently Amended) A data processing computer system according to claim 18, wherein the transforming includes parsing electronic ink data into a hierarchical data structure corresponding to the second data structure.